

Appl. No. 10/055,568  
Amdt. dated December 11, 2006  
Reply to Office action of August 11, 2006

### REMARKS/ARGUMENTS

The Examiner is thanked for the thorough examination and search of the subject.

- 5           Claims 219-223, 228-236, 238-242, 250-257, 259, 260 and 262-267 are pending, wherein Claims 219-223, 228-236, 238-242, 250, 252, 257, 259, 260, 262, 263 and 265-267 are currently amended, and Claims 224-227, 237, 243-249, 258 and 261 are canceled.

10   Request for Continued Examination

Applicants respectfully request continued examination of the above-indicated application as per 37 CFR 1.114.

15   Response to Claim Rejections under 35 U.S.C. 102 and 103

Applicants respectfully traverse the rejections for at least the reasons set forth below.

20   **Response to Claims 219-223, 228-236, 238-242, 250-257, 259, 260 and 262-267:**

As currently amended, independent claim 219 is recited below:

219. A chip package comprising:

- 25           a preformed substrate comprising semiconductor material;  
            only one preformed die joined with said preformed substrate;  
            a first insulating layer comprising a first portion over said only one preformed die and a second portion over said preformed substrate but not over

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said only one preformed die, wherein said first insulating layer comprises polyimide; and

a first patterned circuit layer over said first insulating layer.

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#### Section I

*Reconsideration of Claims 219-224, 227, 228, 231, 232, 235, 236, 237, 243, 244, 250, 251, 257, 260, 263, 264, 266 and 267 rejected under 35 U.S.C. 102(e) as being anticipated by Maruyama (US2001/0042901) is requested based on the following*

10 *remarks.*

In merit to meet requirement of patentability, Applicants have amended Claim 281 with the limitation that "a first insulating layer comprising a first portion over said only one preformed die and a second portion over said preformed substrate but not over said

15 only one preformed die, wherein said first insulating layer comprises polyimide".

Applicants respectfully assert that the method claimed in claim 219 patentably distinguishes over the citations by Maruyama (US2001/0042901).

20 Maruyama teaches a semiconductor wafer 11 provided with multiple circuit regions 12, an insulating layer 20, such as SiO<sub>2</sub>, over the semiconductor wafer 11, and a patterned circuit layer 15 over the insulating layer 20. (*See FIGS. 17A-17D and paragraphs [0168]-[170]*)

25 The Examiner considers that the circuit region 12 can be deemed as a die. (*See point 4 on page 2, in the last Office Action mailed Aug. 11, 2006*)

The Examiner's opinion seems to be broadly interpreted. "Die" is typically

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well-known as a body separated from "Wafer". The circuit regions 12 are in the semiconductor wafer 11 but not separated from the wafer 11. The circuit regions 12 are typically formed over a semiconductor substrate by a sputtering process, for example, during forming the semiconductor wafer 11. A die is provided by separating the  
5 semiconductor wafer 11 after being formed with the circuit regions 12.

The circuit regions 12 can not be deemed as a preformed body to be joined with a preformed semiconductor substrate. It is believed that the subject matter of "only one preformed die joined with a preformed substrate" is not anticipated by Maruyama.  
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Furthermore, Maruyama fails to teach the chip package may comprises an insulating layer comprising a first portion over only one preformed die and a second portion over a preformed substrate but not over the only one preformed die, wherein the insulating layer comprises polyimide, as claimed in Claim 219.

15 As a result, withdrawal of rejection under 35 U.S.C. 102(e) to Claim 219 is respectfully requested.

For at least the foregoing reasons, applicants respectfully submit independent claim  
20 219 patently distinguishes over the prior art references, and should be allowed. For at least the same reasons, dependent claims 220-223, 228-236, 238-242, 250-257, 259, 260 and 262-267 patently define over the prior art as well.

## Section II

25 *Reconsideration of Claims 219-224, 226-228, 231, 232, 235, 236-239, 243-246, 250, 251, 257, 259-261 and 263-267 rejected under 35 U.S.C. 102(e) as being anticipated by Tabrizi (US6,867,499) is requested based on the following remarks.*

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In merit to meet requirement of patentability, Applicants have amended Claim 281 with the limitation that "a first insulating layer comprising a first portion over said only one preformed die and a second portion over said preformed substrate but not over said only one preformed die, wherein said first insulating layer comprises polyimide".

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Applicants respectfully assert that the method claimed in claim 219 patentably distinguishes over the citations by Tabrizi (US6,867,499).

Tabrizi teaches a chip package comprising a preformed substrate 510 comprising semiconductor material; only one preformed die 520 joined with said preformed substrate 510; a first insulating layer 550 comprising a first portion over said only one preformed die 520 and a second portion over said preformed substrate 510 but not over said only one preformed die 520; and a first patterned circuit layer 560 over said first insulating layer 550. (See FIG 5 and lines 33-44, col. 4)

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Tabrizi teaches the first insulating layer 550 is bisbenzocyclobutene (BCB)(See lines 23 and 39-50, col. 3). However, Tabrizi fails to teach the first insulating layer 550 may comprises polyimide.

Even Nagakari et al. (US6,573,584) teaches an insulating layer 9, such as  $\text{Si}_3\text{N}_4$ ,  $\text{SiO}_2$ , polyimide or BCB, can be formed over a carrier substrate 1 including alumina, sapphire, aluminum nitride, single crystalline  $\text{MgO}$ , single crystalline  $\text{SrTiO}_3$ , silicon with surface oxide, glass or quartz (See Fig. 3 and lines 14-17 and 27-29, col. 5). However, Nagakari et al. (US6,573,584) fail to teach what kind of insulating layer can be formed over a structure constructed of a preformed die joined with a preformed substrate. Nagakari et al. have no motivation to form an insulating layer over a structure constructed of a preformed die joined with a preformed substrate. As a result, it is believed that the insulating layer 550 in Tabrizi's device should be non-analogous to the insulating layer 9

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in Nagakari et al.'s device.

As a result, withdrawal of rejection under 35 U.S.C. 102(e) to Claim 219 is respectfully requested.

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For at least the foregoing reasons, applicants respectfully submit independent claim 219 patently distinguishes over the prior art references, and should be allowed. For at least the same reasons, dependent claims 220-223, 228-236, 238-242, 250-257, 259, 260 and 262-267 patently define over the prior art as well.


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Conclusion

Some or all of the pending claims are believed to be in condition for Allowance, and that is so requested. Applicant respectfully requests that a timely Notice of Allowance be issued in this case. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

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Sincerely yours,



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